Gartner Research

Publication Date: 6 February 2007 ID Number: G00145605

Siemens' HiPath 8000 System

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The HiPath 8000 is a carrier-grade Session Initiation Protocol (SIP)-based Internet Protocol (IP) softswitch for large to very large enterprises. A single system comprised of two servers is designed to support up to 100,000 users.

Key Findings

- The largest HiPath 8000 customer has approximately 12,000 end users, according to Siemens.
- The HiPath 8000 is targeted at Fortune 1000 companies with distributed, remote sites; companies with campus-style structures; large military installations; universities; and state and local governments.

Recommendations

Consider This Product When:

- You are a very large organization looking for a global, SIP-based, carrier-class softswitch with capacity in the tens of thousands of users (per system) and beyond.
- You are an established Siemens customer looking to move upscale and still use established investments in other HiPath systems and Siemens' products as part of your enterprise infrastructure.
- You are a service provider looking for an SIP-based carrier-class softswitch that can be effectively partitioned for multitenant unit functionality among multiple applications or customers.

Consider Alternatives When:

- You have ongoing concerns about the future of Siemens Enterprise Networks that are not addressed shortly.
- Siemens Enterprise cannot effectively articulate its long-term product road map for the HiPath 8000 system and products, or the HiPath 3000 and 4000 systems.

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1.0 HiPath 8000 System

The HiPath 8000 product family supports a wide range of Siemens' IP telephones, requirements for analog devices, unified messaging and contact center applications, wireless and softphone options, and a PC-based management and administration system (see Table 1 for key specifications of the HiPath 8000 system).

Table 1. Siemens HiPath 8000 System Specifications

Feature/Function	HiPath 8000
Type of Processor Architecture	Centralized
Operating System	Linux
Telephony Server CPU	Dual Intel Pentium III (Xeon) 3GHz
Media Server(s)	• IP Unity Mereon 3000 and 6000 • Convedia CMS-1000 Media Server • Siemens Integrated Media Server
Redundancy Support	Standard (redundant servers in active-active mode; load balancing) in larger-scale deployment. Optional in 300 to 5,000 user deployments.
Remote Survivability	Basic survivability supported with the RG 8700; HiPath 3000 and 4000 can be upgraded to support the HiPath 8000.
Maximum Number of Digital Devices Supported (per system)	0
Maximum Number of IP Devices Supported (per system)	100,000
Maximum Number of Analog Devices Supported (per system)	100,000

Source: Siemens (January 2007)

2.0 Analysis

2.1 System Architecture and Hardware

- Three HiPath 8000 media servers are offered: the IP Unity Mereon 6000 for up to 100,000 users, the IP Unity Mereon 3000 and Convedia CMS-1000 for up to 30,000 users, and Siemens' integrated Media Server for 300 to 5,000 users. The media servers perform all the media processing functions required for advanced services, such as unified messaging, conferencing, automatic speech recognition, interactive voice response, text to speech, call detail recording, fax detection and other functions.
- HiPath 8000 reliability and availability are based on active/active-clustered servers. The system supports hot-swappable components, active/standby fast Ethernet links and crossover network connections via Ethernet switches. Fujitsu's Primecluster software controls the failover of active/standby Ethernet links and failover of the clustered nodes.

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- Media Gateway support for the HiPath 8000 includes several options: Siemens HiPath 4000 v.3.0 via SIP; Siemens HiPath 3000 v.7.0 via SIP (pending release); Siemens RG 8700 and RG 2700; and third-party gateways (such as Cisco 3700 and Mediatrix), although supported functionality depends on third-party adherence to the SIP standard.
- Basic survivability for remote locations is supported on the RG 8700, as well as on the HiPath 4000 and 3000 when upgraded to support the HiPath 8000. Station-to-station calls, public switched telephone network access and E9-1-1 services are available at all times in remote locations.
- HiPath 8000 release 2.x uses SIP over Q.Signaling (SIP-Q) to interoperate with other Siemens HiPath systems (such as HiPath 2000, 3000 and 4000).
- A single-server configuration for the HiPath 8000 is available with Siemens' Integrated Media Server and HiPath Assistant for the 300 to 5,000 end-user scenario. Optional redundancy is also available.

2.2 Telephone/Device Support

- Siemens' new OpenStage 20, 40, 60 and 80 SIP phones; Siemens' optiPoint 410 S/420 S; Siemens' optiClient 130 S; and Siemens' WL2 S.
- Tested third-party IP endpoints — Cisco, Grandstream Networks, Polycom, Xten/CounterPath, Snom Technology, Zultys Technologies, ClearOne Communications and WiSIP.

2.3 System Management and Administration

System management for the HiPath 8000 can be implemented in three ways:

- The iSuite — Network Management Center (iNMC), Service Management Center (iSMC) and Subscriber Self-Care (iSSC) for systems with more than 5,000 users.
- The HiPath 8000 Assistant is an integrated administration tool for systems with fewer than 5,000 users.
- The Command Line Interface is a more traditional system-provisioning and administration option.

2.4 Network Signaling Support

- SIP, SIP-Q, Media Gateway Control Protocol, Q.SIG, T1/E1, Integrated Services Digital Network Primary Rate Interface

2.5 Voice/Unified Messaging

- Supports Siemens HiPath Xpressions or third-party systems for unified messaging.
- Supports the IP Unity Mereon Unified Messaging solution — a scalable, carrier-class unified messaging product.
- HiPath ComAssistant S is a Web-browser-based application that enables users to manage incoming voice and e-mail communications from their desktops.

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2.6 Automatic Call Distribution

- Supports Siemens HiPath ProCenter Suite for contact centers with up to 750 active agents in a standard configuration.
- Integrates with the Genesys Contact Center Suite for larger contact center environments.

2.7 Conferencing/Collaboration

- Supports tight, SIP-based integration with Siemens OpenScape collaboration application. OpenScape brings together multiple functions on one platform — telephony, voice mail, e-mail, instant messaging, text messaging, calendaring, directories and conferencing services. Mobility and presence features can also be supported.

2.8 Wireless Support

- Optional via Siemens' optiPoint WL2 professional S solution
- Third-party wireless SIP offerings

3.0 Pricing

- HiPath 8000 ranges from $300 to $500 per user, depending on the number of users.
    - HiPath 8000 pricing example: A 500-user configuration installed with IP Unity software/hardware, voice mail and IP hard phones (gateways excluded) is approximately $307,000.
- Discounts can vary from 20% to 50%, depending on system configuration.

3.1 Licensing

- Siemens supports concurrent user licenses, enabling a user to move to another location without incurring another license charge. Because many customer implementations span multiple countries, this licensing structure applies globally.

3.2 Government Services Administration Pricing

- The HiPath 8000 is not included on the U.S. Government Services Administration pricing schedule for discounts offered to U.S. government agencies.

4.0 Competitors

- Alcatel OmniPCX Enterprise
- Avaya Communication Manager Media Servers and Gateways
- Cisco Unified CallManager
- Nortel CS 1000 and CS 2100
- NEC SV7000

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5.0 Strengths

- The HiPath 8000 is targeted at Fortune 1000 companies with distributed, remote sites; companies with campus-style structures; large military installations; universities; and state and local governments.
- The HiPath 8000 was developed for very large enterprises (up to 100,000 SIP end users per system) using the core capabilities of the carrier-class, Siemens hiQ 8000 softswitch.
- Multiple HiPath 8000 systems can be networked to scale beyond 100,000 users.
- The system uses the Fujitsu-Siemens Resilient Telco Platform (RTP), a fault-tolerant, distributed computing platform that constitutes the HiPath 8000's underlying middleware. In the event of a system failure, RTP is designed to enable the HiPath 8000 to perform a system switchover, while maintaining all active calls with no loss of billing records.

6.0 Challenges

- The HiPath 8000 v.2.2 does not support voice encryption. Support for Secure Real-Time Transport Protocol likely will be available in the v.3.0 release.
- HiPath 8000 product development has been slow rolling out, and the system has been slow penetrating the market. As such, there's a dearth of scalable HiPath 8000 customers available as references. However, Siemens indicates that the customer base for the HiPath 8000 solution has more than doubled since 1Q06, and it reportedly adds a HiPath 8000 customer nearly every week.
- The HiPath 8000 is not optimal for organizations with fewer than 300 users.
- No HiPath 8000 support for Siemens' CorNet IP signaling protocol. As such, a HiPath 8000 using SIP-Q network signaling to interoperate with HiPath 2000, 3000 and 4000 systems supports a subset of the full feature set.
- Although more than one HiPath 8000 can be connected and alarm-monitored with the iNMC/iSMC, the HiPath 8000 management tools cannot see multiple 8000s as one system from a configuration perspective.
- There remain many questions around Siemens' pending divestment (sale or otherwise) of its Enterprise Networks unit. An early October 2006 announcement date to address some of these questions passed with little new information from Siemens, leaving customers and partners to continue wondering about the long-term viability of Siemens Enterprise Networks and its current products. As such, customers should consider the likelihood (or lack thereof) of long-term product support before investing in Siemens' technology. The company maintains that development will continue uninterrupted on the HiPath 8000 platform, with release 3.0 planned for 2Q07.

7.0 Company Information

7.1 Corporate Headquarters

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7.3 At-a-Glance

Table 2. Siemens Enterprise Communications At-a-Glance

Attributes	Comments
Product Portfolio	Siemens has a good product portfolio, but new product development, rollouts and releases are slow to market, especially in North America.
Customer Experience	Typically have enjoyed a loyal time division multiplexing (TDM) customer base, but the transition to IP telephony has not been as kind to Siemens for sales and service.
Differentiators	Siemens has a strong integration story around Microsoft applications with HiPath systems and Siemens OpenScape — its multimedia collaboration platform. Strong global presence, especially in Europe, the Middle East and Africa (EMEA), North America, Central America and Latin America.
Distribution	Siemens' channel distribution is about 80% direct, 20% indirect.
Financial	The Siemens Enterprise business is up for sale by its parent company, Siemens; Siemens Enterprise financials are uncertain at best.
Geographic Coverage	Strong global coverage, especially in EMEA, North America, Central America and Latin America.
Maintenance Capabilities	Siemens Business Services has strong global presence, demonstrating more TDM than IP telephony expertise.
Market Responsiveness	Among the first telephony vendors to support SIP and integrate with Microsoft applications. However, release of new products and updates are frequently sluggish, significantly lagging behind announcements by many months.
Market Share	8.1% worldwide, 3.4% North America; with latter market share declining in overall telephony shipments during recent years vs. the competition.
Pricing	Very competitive; Siemens typically competes well on price.
Service and Support	Siemens Business Services has strong global presence, with emphasis in EMEA and North America.
Vertical-Market Segments	Siemens is particularly strong in the healthcare, transportation and manufacturing markets.

Source: Gartner Dataquest (January 2007)

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RECOMMENDED READING

"Magic Quadrant for Corporate Telephony in North America, 2006"

"Magic Quadrant for Corporate Telephony in Europe, the Middle East and Africa, 2006"

"Magic Quadrant for Corporate Telephony in Asia/Pacific, 2006"

"Siemens Enterprise Communications Carves Out Its Independence"

Acronym Key and Glossary Terms

EMEA Europe, the Middle East and Africa

iNMC Network Management Center

IP Internet Protocol

iSMC Service Management Center

iSSC Subscriber Self-Care

RTP Resilient Telco Platform

SIP Session Initiation Protocol

SIP-Q SIP-Q.Signaling

TDM time division multiplexing

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